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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,626	01/13/2004	Mauro Cerisola	36030108 US02	2502
57299	7590	06/30/2006	EXAMINER	
AVAGO TECHNOLOGIES, LTD.			SINGH, DALZID E	
P.O. BOX 1920			ART UNIT	
DENVER, CO 80201-1920			PAPER NUMBER	
			2613	

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/756,626

Applicant(s)

CERISOLA, MAURO

Examiner

Dalzid Singh

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10, 12 and 13 is/are rejected.
- 7) ☒ Claim(s) 7, 9, 11 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 4 recites the limitation "said pre-emphasis network" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
4. Claims 1-5, 6, 8, 10, 12 and 13 are rejected under 35 U.S.C. 102(a) as being anticipated by the prior art as disclosed by applicant on Fig. 2 (hereinafter "prior art").

Regarding claim 1, shown in Fig. 2, the prior art shows a method of injecting an AC pilot tone into a digital signal comprising:

setting the power of said digital signal via a digital-to-analog converter (12) having a reference input for connection to a DC reference signal (14); and injecting said pilot tone (16) into said reference input of said digital-to-analog converter (the pilot tone is injected or added by the addition circuit (19)).

Regarding claim 2, comprising applying to said reference input of said digital-to-analog converter a weighted sum of said DC reference signal (from 14) and said AC pilot tone (from 16).

Regarding claim 3, wherein said digital-to-analog converter has an output and exhibits a transfer function between said reference input and said output, wherein said transfer function has a high-frequency roll-off, the method including associating with said reference input of said digital-to-analog converter a pre-emphasis network for compensating for said roll-off (it is well known to provide pre-emphasis network; see paragraph [0046]).

Regarding claim 4 (in view of the 112 2nd), as indicated on paragraph [0046] of the specification, it is well known to provide pre-emphasis circuit; shown in Fig. 2 the prior art shows reference input of said digital-to-analog converter and a summation node for generating said weighted sum.

Regarding claim 5, shown in Fig. 2, the prior art shows providing a laser for generating said digital signal as a stream of optical pulses, the power of said pulses being set by said digital-to-analog converter.

Regarding claim 6, shown in Fig. 2, providing a laser driver (LD) having an input for setting the modulation current (I_{mod}) of said optical pulses and the step of driving (I_{bias}) said setting input of the laser driver via the output of said digital-to-analog converter (10 and 12).

Regarding claim 8, shown in Fig. 2, the prior art shows a device for injecting an AC pilot tone into a digital signal, comprising:

a digital-to-analog converter (12) wherein the power of said digital signal is set by said a digital-to-analog converter, said digital-to-analog converter having a reference input for connection to a DC reference signal (14); and

a source of said pilot tone (16), said source being arranged to inject said pilot tone into said reference input of said digital-to-analog converter (the pilot tone is injected or added by the addition circuit (19)).

Regarding claim 10, wherein said digital-to-analog converter has an output and exhibits a transfer function between said reference input and said output, wherein said transfer function has a high-frequency roll-off, and wherein associated with said reference input of said digital-to-analog converter there is provided a pre-emphasis network for compensating for said roll-off (it is well known to provide pre-emphasis network; see paragraph [0046]).

Regarding claim 12, shown in Fig. 2, wherein the device is associated with a laser source (L) for generating said digital signal as a stream of optical pulses, the power of said optical pulses being set by said digital-to-analog converter (10 and 12).

Regarding claim 13, shown in Fig. 2, the device comprises a laser driver (LD) having an input for setting the modulation current (I_{mod}) of said optical pulses and, wherein said setting input of the laser driver is set by the output of said digital-to-analog converter (10 and 12).

Allowable Subject Matter

5. Claims 7, 9, 11 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bosch et al (US Patent No. 5,373,387) is cited to show method for controlling the amplitude of an optical signal.

Ciancio (US Pub No. 2002/0196595) is cited to show laser diode current controller.

Fennely et al (US Pub. No. 2004/0144913) is cited to show apparatus and method for setting AC bias point of an optical transmitter module.

Stiscia (US Patent No. 5,402,433) is cited to show apparatus and method for laser bias and modulation control.

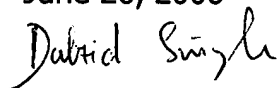
Farhan et al (US Patent No. 6,373,611) is cited to show digital optical transmitter.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DS
June 26, 2006

A handwritten signature in black ink, appearing to read "David Singh".